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WASHINGTON, D.C. 20301

25X1

1 October 1969

MEMORANDUM FOR CHAIRMAN, COMIREX

SUBJECT: Worldwide Positioning Requirements

1. Attachment, subject as above, is forwarded for action by COMIREX.
2. Before leaving on recent overseas trip [redacted] asked that review of this matter by COMIREX be scheduled not earlier than 8 October which is his planned return date.

[redacted]

1 Enclosure a/s

Deputy Chairman
COMIREX MC&G Working Group

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25X1A 13 NRO [redacted]
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DIA and NRO review(s)
completed.GROUP 1 Excluded from Automatic Downgrading
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MEMORANDUM FOR UNITED STATES INTELLIGENCE BOARD

1 Oct 69

SUBJECT: Worldwide Positioning Requirements

References: a. USIB-D-41.14/295 (COMOR-D-13/65), 11 July 1966

b. USIB-D-46.4/24 (COMIREX-D-15.2/12, 29 October 1968-
LIMDIS and Memo for Holders of USIB-D-46.4/24,
20 November 1968 - LIMDIS.

BACKGROUND

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1. Reference a. stated the DoD worldwide positioning requirements of []
feet horizontal and [] vertical 90% assurance relative to the World
Geodetic System in support of long-range missiles.

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2. Further reviews in January - March 1969 with regard to the urgency of
the requirement, and NRO problems of initiating the Doppler Beacon collection
in Summer of 1969, resulted in scheduling 4 Doppler Beacon KH-4B missions
beginning in March 1970 instead of 5 missions beginning in Summer 1969.

NRO estimates that for an additional cost of [] for
Doppler Beacons and antennae, all 6 remaining KH-4B DISIC (3" Frame Camera)
missions could be operated with the Doppler Beacon instead of the 4 presently
established. An increase of 2 KH-4B Doppler missions would have the
advantage to DoD of positioning a significant number of additional Priority I
targets in line with []

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increasing the positioning accuracy of other targets and providing needed

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geodetic control for stereophotogrammetric mapping operations being conducted

Even though

DISIC photography with Doppler Beacon might be partially cloud covered, photogrammetric control can be established through use of the more precise orbit. This permits control to be transferred to other cloud free photography. The advantages to DoD far outweigh the cost involved.

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3. Requirements for target positioning and geodetic control for mapping and charting include Northern latitude areas having limited light in winter months. This will necessitate that some of the KH-4B DISIC missions with Doppler Beacon be operated during summer months.

4. The Department of Defense had indicated a tightening of the worldwide positioning requirement for long range missiles. Extensive research and development has been performed on a continuous basis to advance the capability of weapons systems. Major attention has been given to long-range missiles and supporting activities including those contributing to reducing the geodetic and geophysical error of missile operations. Factors of long lead time for acquisition and data reduction and potential benefit in missile effectiveness in view of the cost involved are the basis for the DoD establishing a technical objective of reducing the positioning portions of the geodetic and geophysical components of missile operations from feet

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horizontal and feet vertical to feet horizontal and feet vertical by 1974. (All values 90% assurance relative the World Geodetic System).

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5. The KH-4B DISIC with Doppler Beacon will meet the feet horizontal and feet vertical positioning requirement but will not meet the tighter positioning requirement of feet horizontal and feet vertical.

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IMPACT ON INTELLIGENCE

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6. According to the NRO, the Doppler Beacon can be added to the KH-4B,

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RECOMMENDATIONS

7.

a. That USIB recognize the updated DoD worldwide positioning requirement in support of long range missiles as feet horizontal and feet vertical beginning in June 1970 and a feet horizontal and feet vertical requirement by 1974, all values 90% assurance relative the World Geodetic System.

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b. In view of the benefits to be gained and the relatively low cost involved, it is recommended that the USIB agree that the NRO:

(1) Add the Doppler Beacon to 6 KH-4B DISIC (3"frame camera) systems beginning in March 1970. (Instead of the 4 systems approved in ref b.)

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